AMENDMENTS TO THE CLAIMS

Claims 1-8 (Cancelled)

Claim 9 (Currently Amended) A visual processing device comprising:

a parameter outputter for determining an adjustment parameter according to ambient light and for outputting the adjustment parameter;

a spatial processor for spatially processing a plurality of pixels surrounding a target pixel of an input image signal, so as to output a processed signal; and

a visual processor for receiving the input image signal, the processed signal and the adjustment parameter, for determining ~~processing unit operable to (i) determine~~ a conversion characteristic according to the processed signal, for adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, and for converting the target pixel of the input image signal according to the adjusted conversion characteristic, so as to output an output converted signal, the visual processing device including a hardware processor ~~in accordance with information from a plurality of pixels surrounding a target pixel of an input image signal, (ii) convert the target pixel in accordance with the determined conversion characteristic, and (iii) output an output signal generated by performing visual processing to the image signal; and,~~

wherein the visual processor determines the conversion characteristic, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases, and

wherein the visual processor adjusts the determined conversion characteristic, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at least one of a brightness and a local contrast of the output converted signal increases

~~a parameter output unit operable to output an adjustment parameter determined according to ambient light,~~

~~wherein the output signal is generated by adjusting at least one of a brightness and a local contrast of the image signal based on a contrast between an average signal value of the plurality of pixels surrounding the target pixel and a value of the target pixel,~~

~~wherein the visual processing unit corrects a degree of the adjusting of the at least one of the brightness and the local contrast of the image signal based on the adjustment parameter output by the parameter output unit, and~~

~~wherein the conversion characteristic is determined, such that within a predetermined input range of the image signal, and with respect to a specific value of the image signal, a corresponding value of the output signal monotonically decreases as a corresponding value of a processed signal, obtained by processing the input image signal, increases~~.

Claim 10 (Cancelled)

Claim 11 (Cancelled)

Claim 12 (Currently Amended) The visual processing device according to claim 9 ~~claim 10~~, wherein the output converted signal is generated by enhancing ~~the~~ a brightness of the input image signal based on ~~the~~ a contrast between the processed signal and the input image

signal, and increasing a degree of the enhancement of the brightness of the input image signal as [[a]] the brightness of the ambient light increases, such that the degree of the enhancement of the brightness is based on the adjustment parameter.

Claims 13-16 (Cancelled)

Claim 17 (Currently Amended) The visual processing device according to claim 9 ~~claim 10~~, wherein the visual processor ~~processing unit~~ has a processing characteristic, such that ~~within the predetermined input range of the image signal, and~~ with respect to the specific brightness ~~value~~ of the input image signal, when ~~the corresponding~~ a value of the processed signal is fixed to a predetermined level, ~~the corresponding value of~~ the output converted signal becomes larger in value according to a ~~is~~ downwardly convex curve, such that a degree of the downwardly convex curve decreases as the ~~that the corresponding value of the output signal is upwardly convex increases as a~~ brightness of the ambient light increases, so that ~~such that~~ the degree of the downwardly convex curve ~~that the corresponding value of the output signal is downwardly convex~~ is based on the adjustment parameter.

Claims 18-20 (Cancelled)

Claim 21 (Currently Amended) An image display device comprising:

a parameter outputter for determining an adjustment parameter according to ambient light and for outputting the adjustment parameter;

a transformation portion including:

a spatial processor for spatially processing a plurality of pixels surrounding a target pixel of an input image signal, so as to output a processed signal; and

a visual processor for receiving the input image signal, the processed signal and the adjustment parameter, for determining ~~processing unit operable to (i) determine~~ a conversion characteristic according to the processed signal, for adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, and for converting the target pixel of the input image signal according to the adjusted conversion characteristic, so as to output an output converted signal ~~in accordance with information from a plurality of pixels surrounding a target pixel of an input image signal, (ii) convert the target pixel in accordance with the determined conversion characteristic, and (iii) output an output signal generated by performing visual processing to the image signal~~; and

a display unit operable to display the output converted signal~~; and~~

wherein the visual processor determines the conversion characteristic, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases, and

wherein the visual processor adjusts the determined conversion characteristic, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at least one of a brightness and a local contrast of the output converted signal increases~~a parameter output unit operable to output an adjustment parameter determined according to ambient light,~~

~~wherein the output signal is generated by adjusting at least one of a brightness and a local contrast of the image signal based on a contrast between an average signal value of the plurality of pixels surrounding the target pixel and a value of the target pixel,~~

~~wherein the visual processing unit corrects a degree of the adjusting of the at least one of the brightness and the local contrast of the image signal based on the adjustment parameter output by the parameter output unit, and~~

~~wherein the visual processing unit has a processing characteristic, such that within a predetermined input range of the image signal, and with respect to a specific value of the image signal, a corresponding value of the output signal monotonically decreases as a corresponding value of a processed signal, obtained by processing the input image signal, increases.~~

Claim 22 (Currently Amended) The image display device according to claim 21, wherein the parameter outputter ~~output unit~~ comprises a brightness detection unit operable to detect a brightness of a display environment of the display unit, and output the adjustment parameter in accordance with the brightness of the display environment detected by the brightness detection unit.

Claim 23 (Currently Amended) A visual processing method comprising:

determining an adjustment parameter according to ambient light;

spatially processing a plurality of pixels surrounding a target pixel of an input image signal to obtain a processed signal; and

performing visual processing, via a hardware processor, by receiving the input image signal, the processed signal and the adjustment parameter, by determining a conversion characteristic according to the processed signal, by adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, and by converting the target pixel of the input image signal according to the adjusted conversion

characteristic, so as to output an output converted signal ~~in accordance with information from a plurality of pixels surrounding a target pixel of an input image signal;~~,

wherein the performing of the visual processing determines the conversion characteristic, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases, and

wherein the performing of the visual processing adjusts the determined conversion characteristic, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at least one of a brightness and a local contract of the output converted signal increases

~~converting the target pixel in accordance with the determined conversion characteristic;~~

~~outputting an output signal generated by performing visual processing to the image signal; and~~

~~outputting an adjustment parameter determined according to ambient light,~~

~~wherein the output signal is generated by adjusting at least one of a brightness and a local contrast of the image signal based on a contrast between an average signal value of the plurality of pixels surrounding the target pixel and a value of the target pixel,~~

~~wherein a degree of the adjusting of the at least one of the brightness and the local contrast of the image signal is corrected based on the adjustment parameter output by the outputting of the adjustment parameter, and~~

~~wherein the conversion characteristic is determined, such that within a predetermined input range of the image signal, and with respect to a specific value of the image signal, a corresponding value of the output signal monotonically decreases as a corresponding value of a processed signal, obtained by processing the input image signal, increases~~.

Claim 24 (Currently Amended) A processor used for an image output device, the processor executing a processes of:

determining an adjustment parameter according to ambient light;

spatially processing a plurality of pixels surrounding a target pixel of an input image signal to obtain a processed signal; and

performing visual processing by receiving the input image signal, the processed signal and the adjustment parameter, by determining a conversion characteristic according to the processed signal, by adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, and by converting the target pixel of the input image signal according to the adjusted conversion characteristic, so as to output an output converted signal ~~in accordance with information from a plurality of pixels surrounding a target pixel of an input image signal;~~,

wherein the performing of the visual processing determines the conversion characteristic, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases, and

wherein the performing of the visual processing adjusts the determined conversion characteristic, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at lest one of a brightness and a local contrast of the output converted signal increases~~converting the target pixel in accordance with the determined conversion characteristic;~~

~~outputting an output signal generated by performing visual processing to the image signal; and~~

~~outputting an adjustment parameter determined according to ambient light,~~

~~wherein the output signal is generated by adjusting at least one of a brightness and a local contrast of the image signal based on a contrast between an average signal value of the plurality of pixels surrounding the target pixel and a value of the target pixel,~~

~~wherein a degree of the adjusting of the at least one of the brightness and the local contrast of the image signal is corrected based on the adjustment parameter output by the outputting of the adjustment parameter, and~~

~~wherein the conversion characteristic is determined, such that within a predetermined input range of the image signal, and with respect to a specific value of the image signal, a corresponding value of the output signal monotonically decreases as a corresponding value of a processed signal, obtained by processing the input image signal, increases~~.

Claim 25 (Currently Amended) A non-transitory computer-readable recording medium having an image processing program recorded thereon, the image processing program causing a computer to execute a visual processing method comprising:

determining an adjustment parameter according to ambient light;

spatially processing a plurality of pixels surrounding a target pixel of an input image signal to obtain a processed signal; and

performing visual processing by receiving the input image signal, the processed signal and the adjustment parameter, by determining a conversion characteristic according to the processed signal, by adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, and by converting the target pixel of the input image signal according to the adjusted conversion characteristic, so as to output an output

converted signal ~~in accordance with information from a plurality of pixels surrounding a target pixel of an input image signal;~~,

wherein the performing of the visual processing determines the conversion characteristic, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases, and

wherein the performing of the visual processing adjusts the determined conversion characteristic, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at least one of a brightness and a local contrast of the output converted signal increases

~~converting the target pixel in accordance with the determined conversion characteristic;~~

~~outputting an output signal generated by performing visual processing to the image signal; and~~

~~outputting an adjustment parameter determined according to ambient light,~~

~~wherein the output signal is generated by adjusting at least one of a brightness and a local contrast of the image signal based on a contrast between an average signal value of the plurality of pixels surrounding the target pixel and a value of the target pixel,~~

~~wherein a degree of the adjusting of the at least one of the brightness and the local contrast of the image signal is corrected based on the adjustment parameter output by the outputting of the adjustment parameter, and~~

~~wherein the conversion characteristic is determined, such that within a predetermined input range of the image signal, and with respect to a specific value of the image signal, a corresponding value of the output signal monotonically decreases as a corresponding value of a processed signal, obtained by processing the input image signal, increases.~~